

FIG. 1A

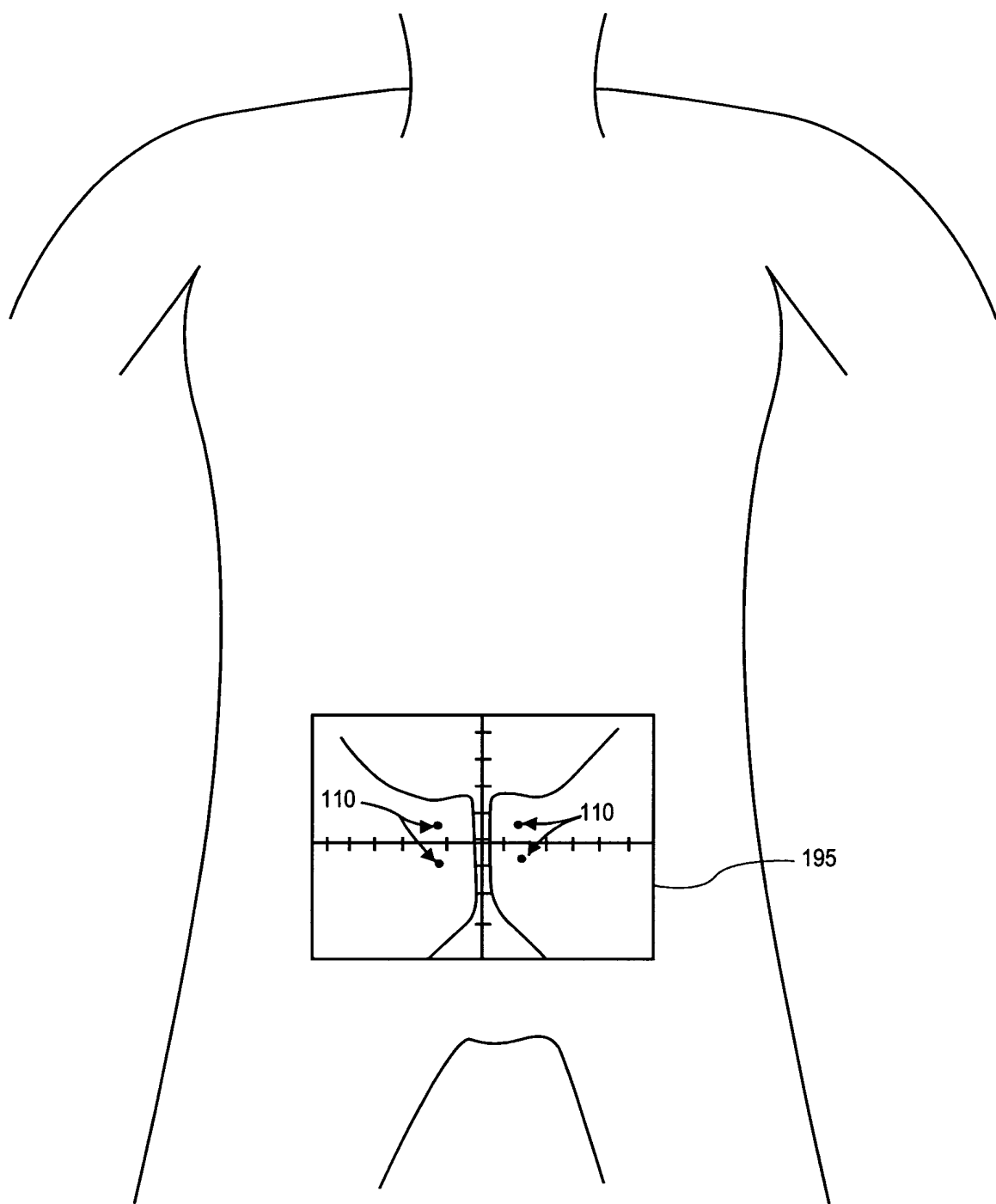


FIG. 1B

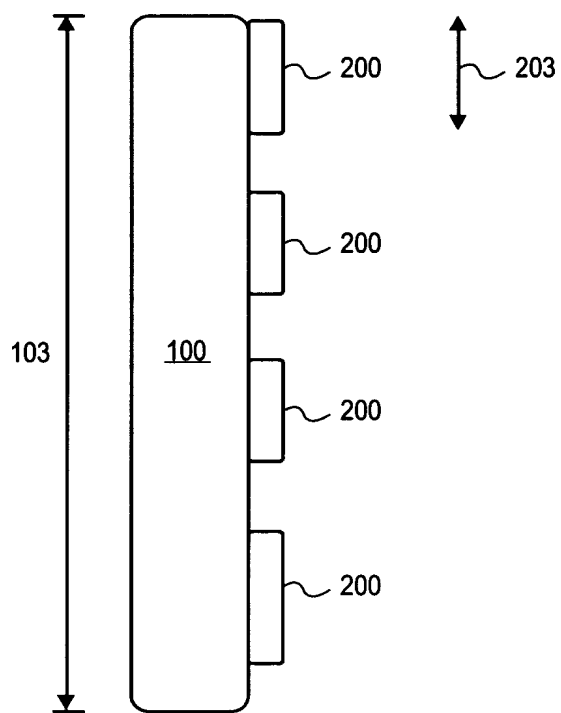


FIG. 2A

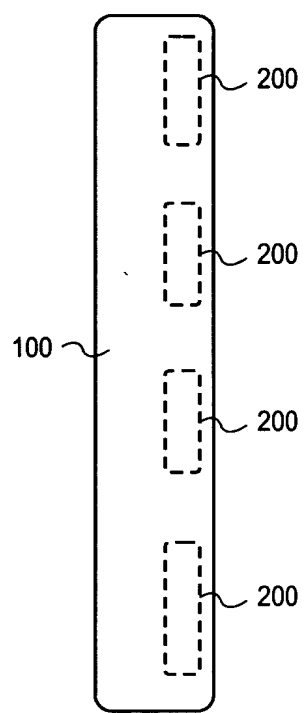


FIG. 2B

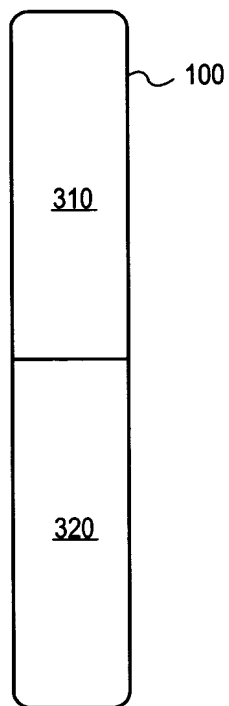


FIG. 3

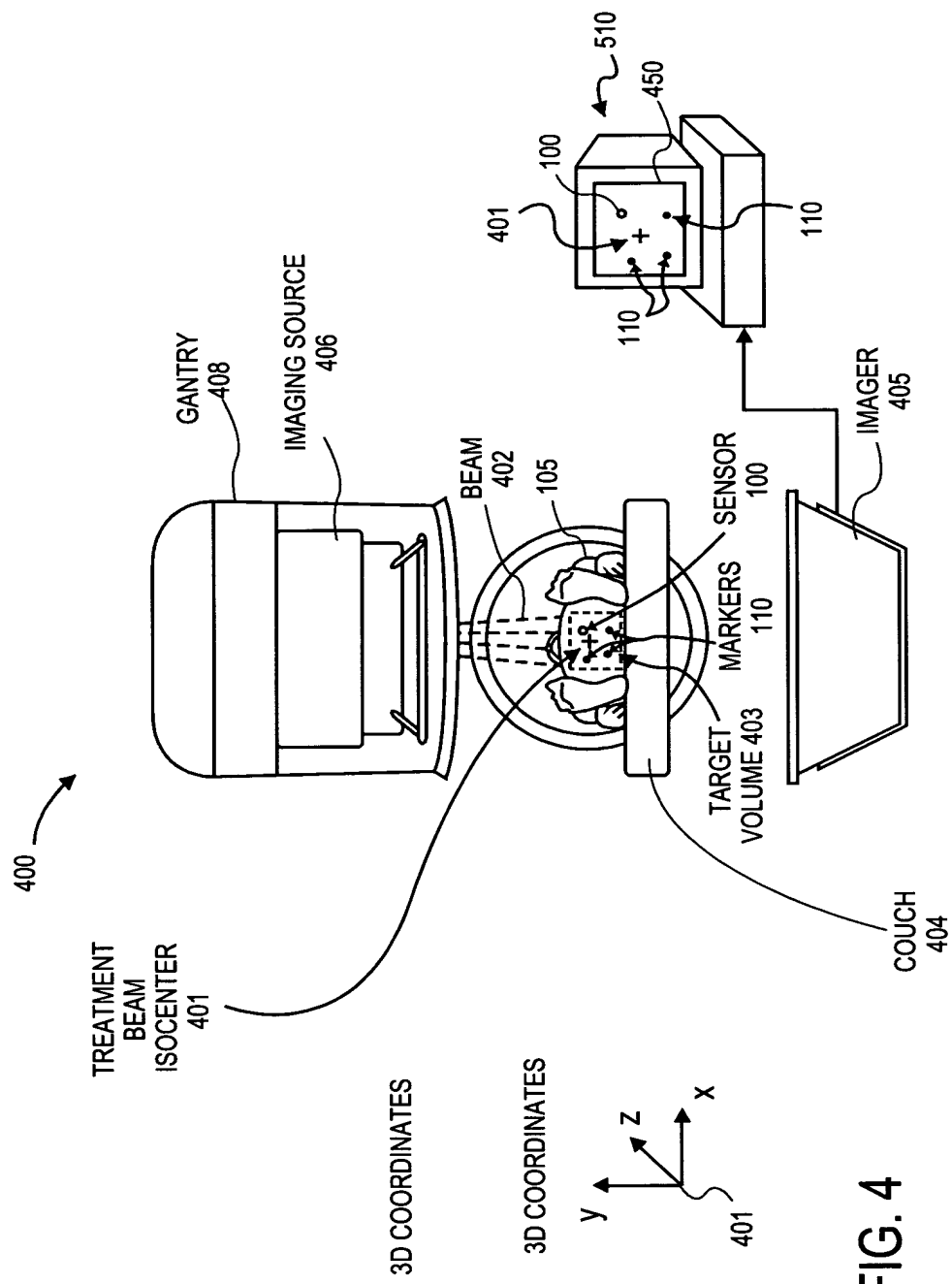


FIG. 4

DIGITAL PROCESSING SYSTEM 510

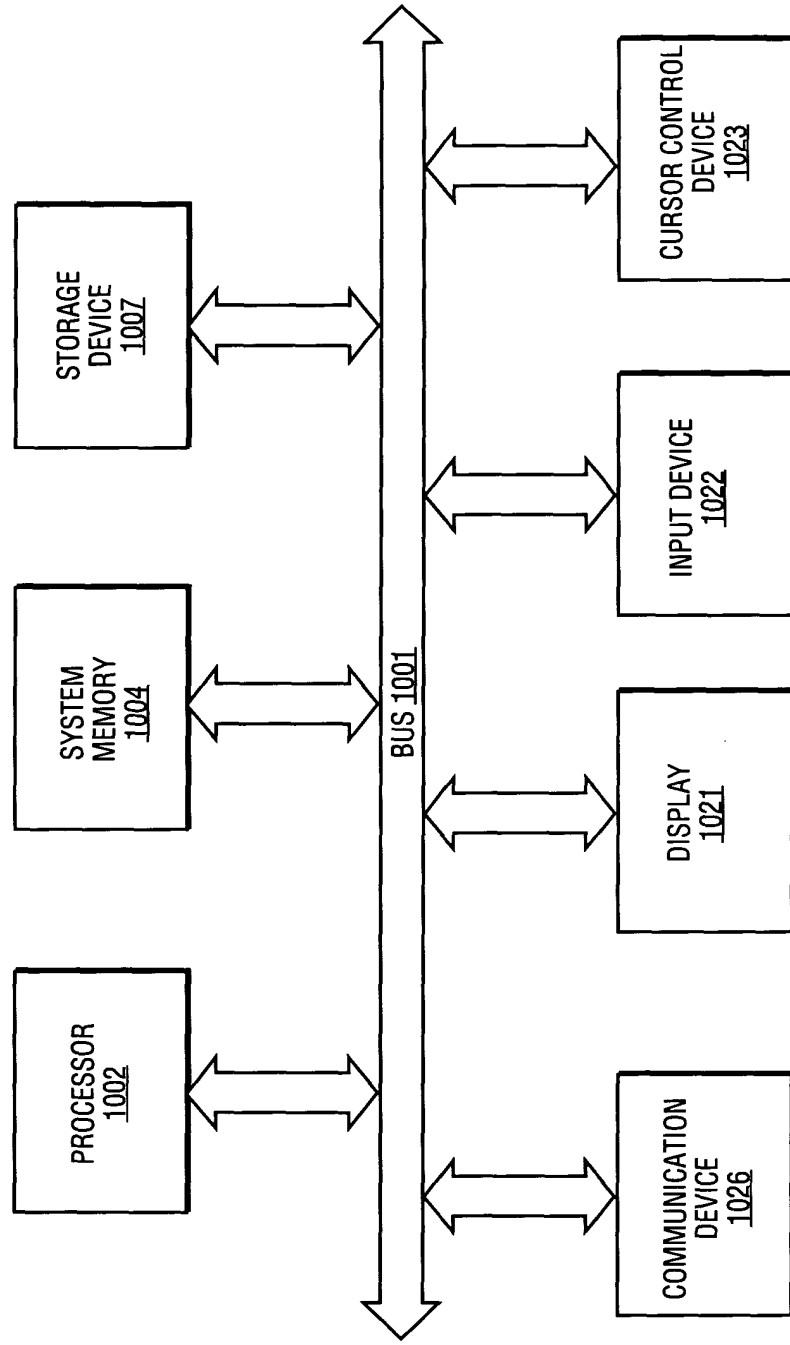


FIG. 5

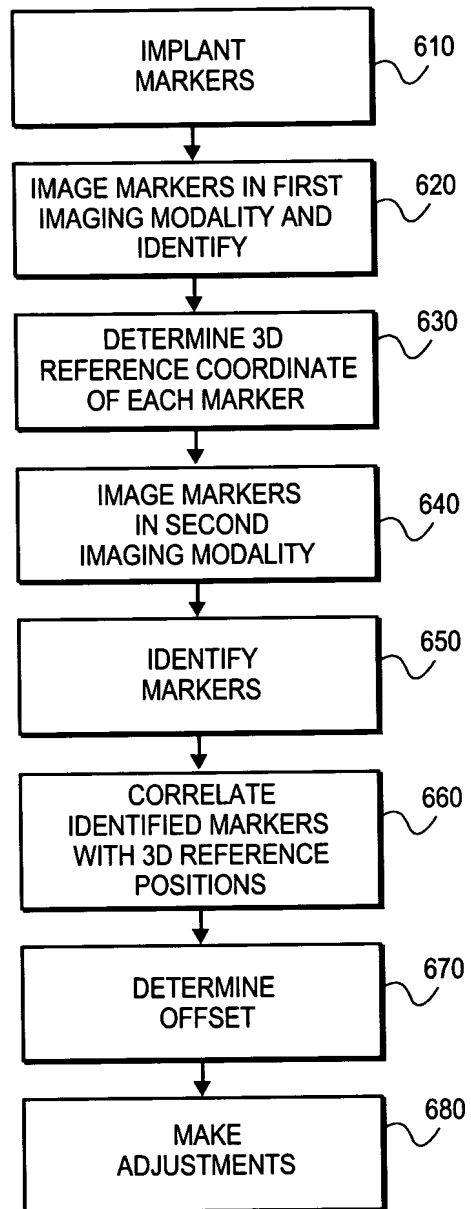


FIG. 6

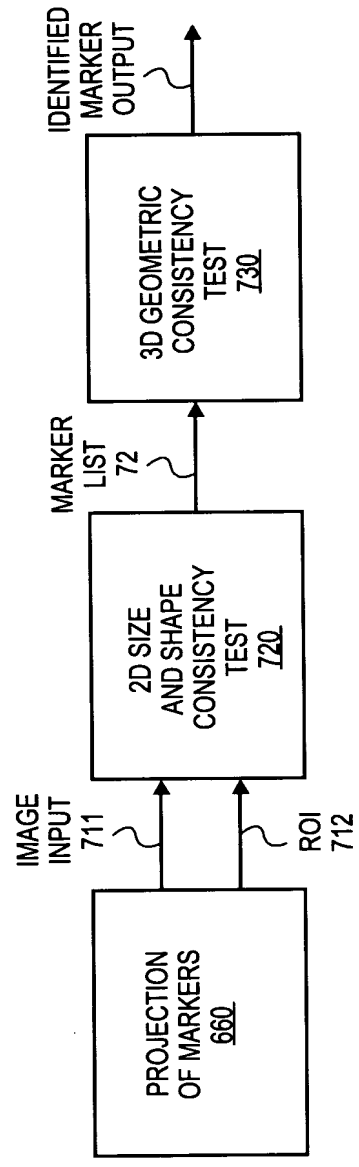


FIG. 7

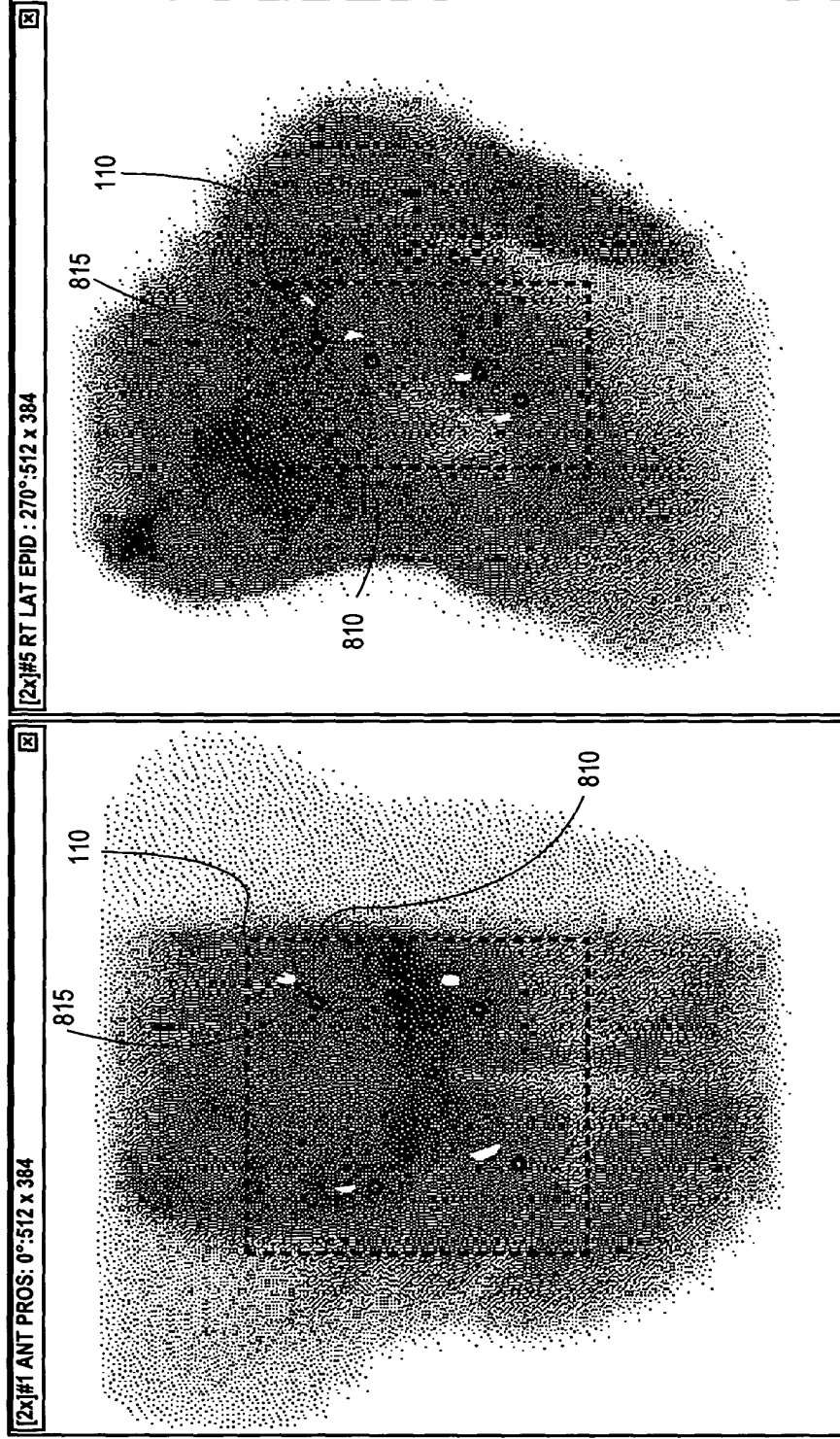


FIG. 8A

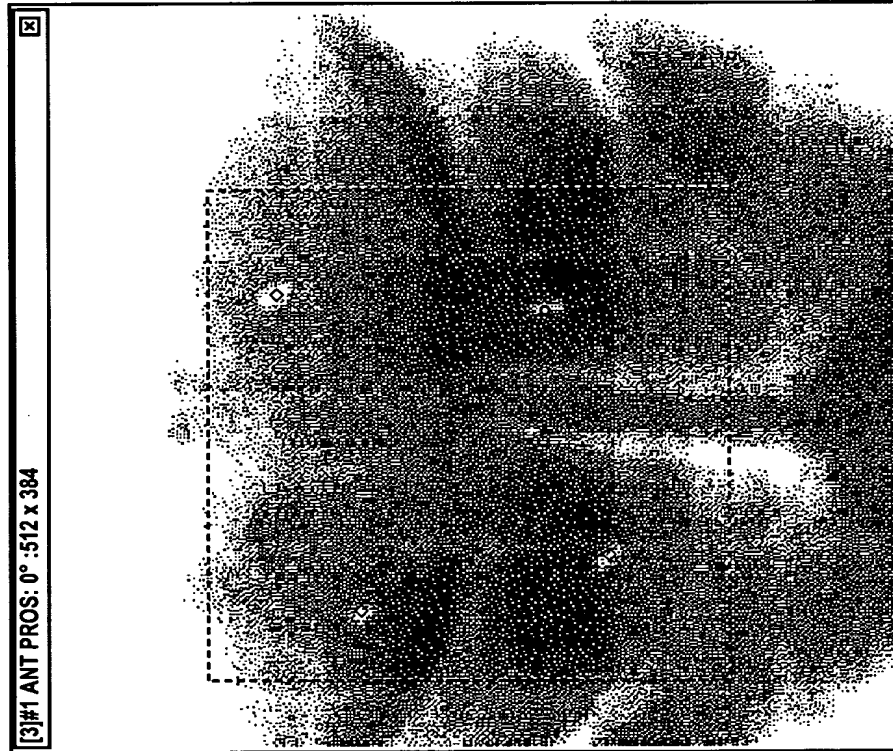


IMAGE A

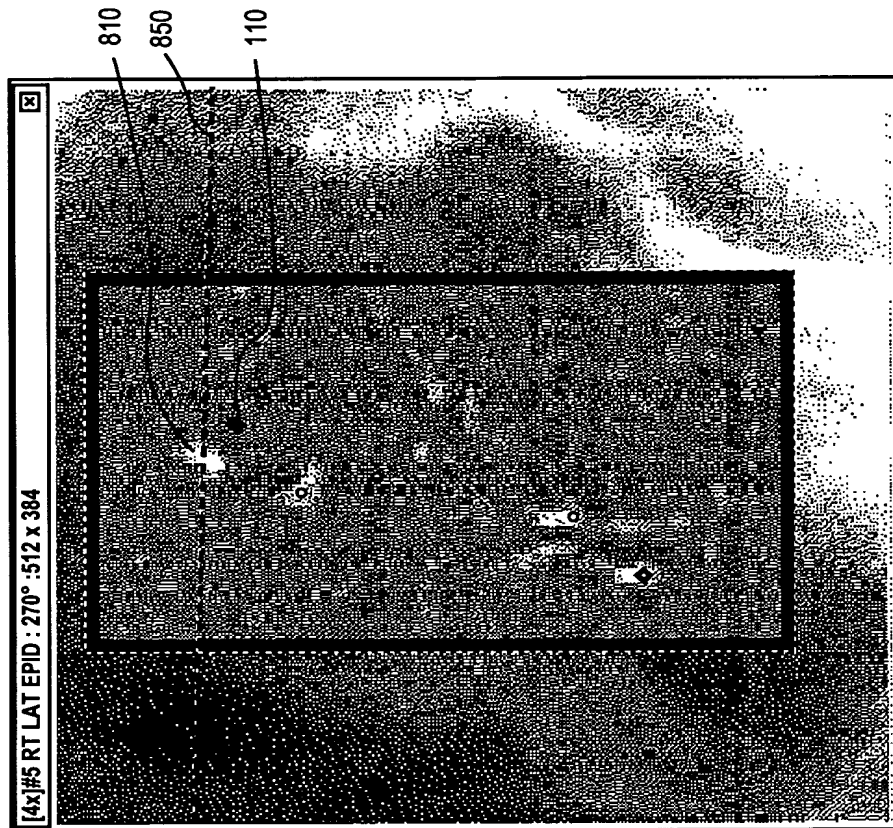


IMAGE B

FIG. 8B

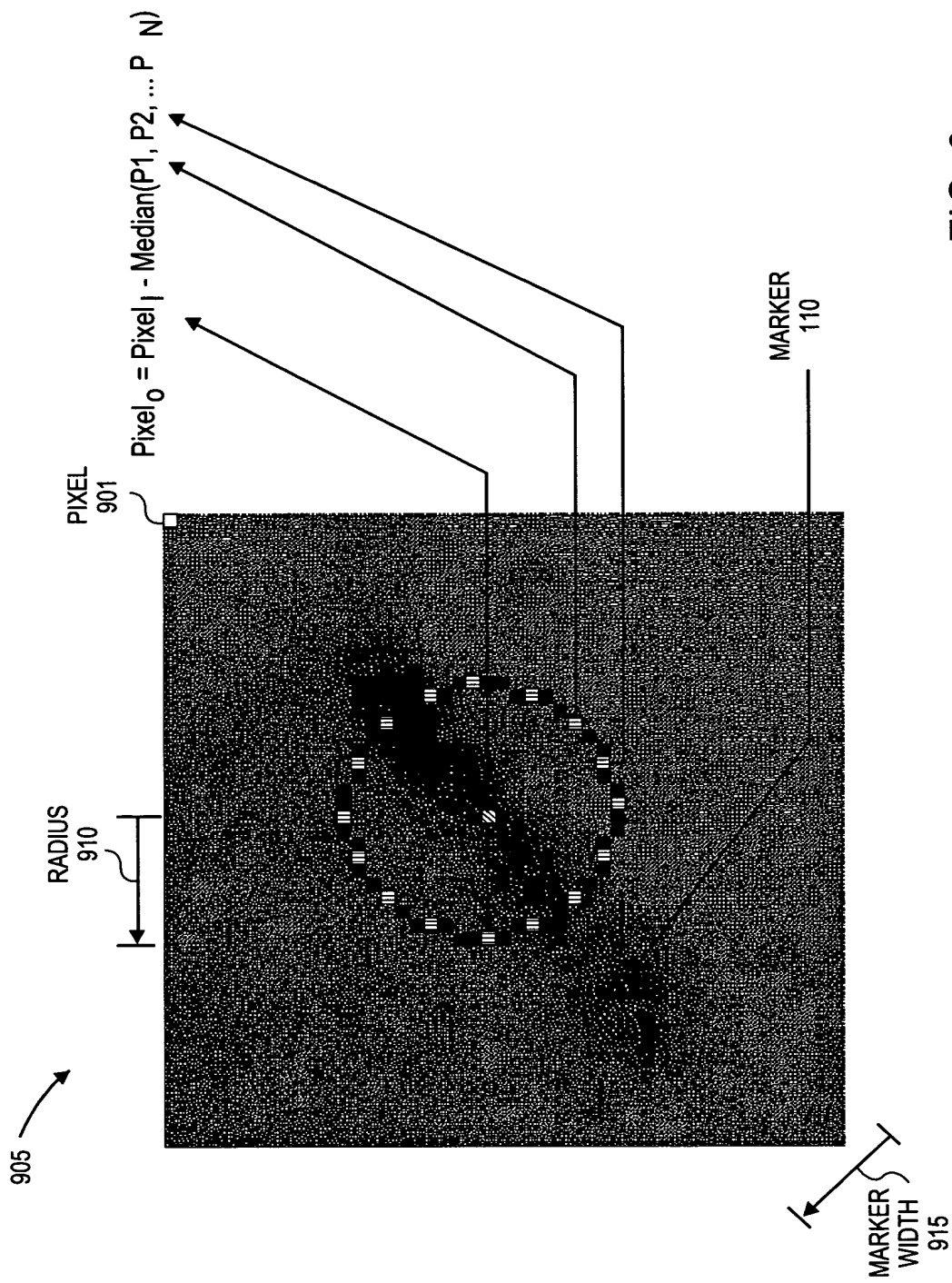


FIG. 9

IMAGE
REGION
WITH
SEED

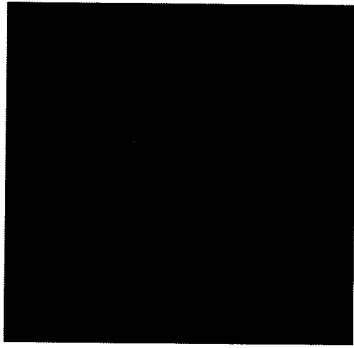


FIG. 10A



FIG. 11A



FIG. 12A

IMAGE
REGION
WITH
NOISE



FIG. 10B



FIG. 11B



FIG. 12B

Rigid or deformable target 1310	Number of visible implanted markers 1320	Number of positioning images in each treatment session 1330	Adjustments that can be estimated 1340
Rigid	Three or more	Two or more from different angles suitable for triangulation	For each treatment field: patient position/orientation, MLC position/rotation
Deformable	Three or more	Two or more from different angles suitable for triangulation	For each treatment field: patient position/orientation, MLC position/rotation, MLC shape; the accuracy of MLC shape calculation depends on the number of markers and the spread of them in the target volume
Rigid	Three or more	One - (preferably from the direction that markers are most visible)	For all treatment fields: patients position/orientation; MLC position/rotation
Deformable	Three or more	One - from the same angle as the treatment field	For that treatment field: patient position/orientation; MLC position/rotation, MLC shape
Deformable	Two	One - from the same angle as the treatment field	For all treatment fields: patients position/orientation; MLC position/rotation
Rigid	One	One - from the same angle as the treatment field	For that treatment field: patient/MLC position

FIG. 13

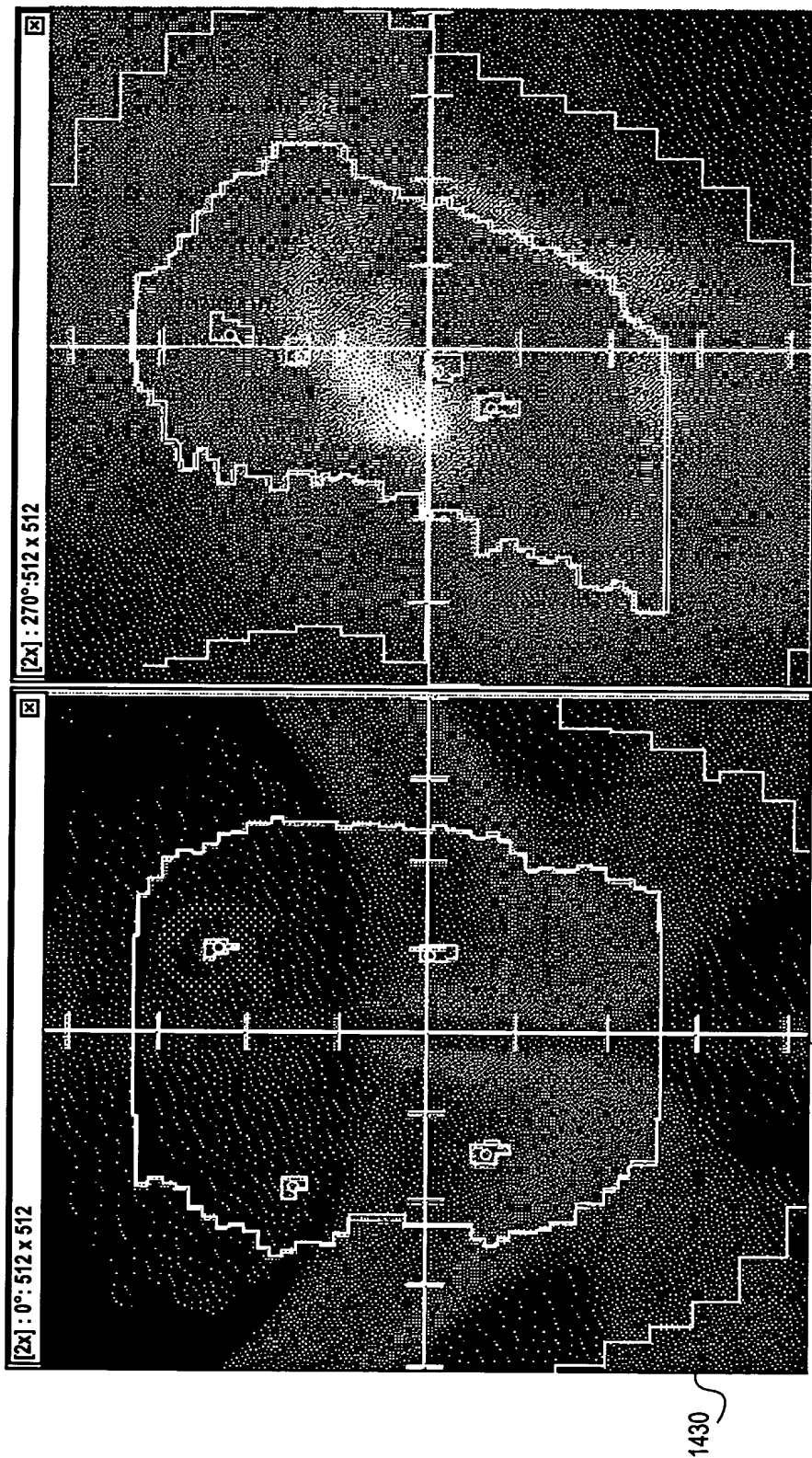


FIG. 14

Register Reference Markers

Reference Markers

Marker coordinates relative to the isocenter.

Marker	x (cm)	y (cm)	z (cm)
1	-2.29	+1.03	+0.16
2	-1.45	-1.81	-0.09
3	+0.08	+0.96	-0.26
3	+0.70	-1.44	-0.67

X - Value increases when moving away from gantry

Y - Values increase to left when viewing from gantry

Z - Values increase when moving down

Save

Cancel

FIG. 15